Wisconsin Association of Lakes

A nonprofit group of citizens, organizations, and businesses working for clean, safe, healthy lakes for everyone.

4513 Vernon Boulevard, Suite 101 · Madison, WI 53705-4964
608-661-4313 · 800-542-5253 (in WI) · 608-661-4314 fax
wal@wisconsinlakes.org · www.wisconsinlakes.org

MEMORANDUM

TO: **Senate Committee on Environment and Natural Resources**

FROM: **William P. O'Connor (608.255.7277)**
Wisconsin Association of Lakes

DATE: **August 28, 2007**

RE: **Senate Bill 197**
Regulation of Phosphorous Lawn Fertilizer

The Wisconsin Association of Lakes (WAL) urges you to support Senate Bill 197. I want to personally thank the members of this Committee who have joined the bi-partisan group of Senators and Assembly Representatives supporting this bill and the Assembly companion, AB-396, introduced by Representative Bies.

This proposal addresses a significant form of pollution affecting inland waters. The ancient Greeks called Phosphorous (P) the "light bearer" after Venus, the morning star. Its remarkable chemical properties have amazed high school chemistry students for generations. It gives the firefly her light. With Nitrogen and Potassium, Phosphorus is a major plant nutrient, listed second in the rating system used on fertilizer labels.

This legislation aims to limit the use of fertilizers containing Phosphorous and compounds of that element to applications where it is needed. The bill should be viewed in the context of the broader problem of runoff pollution. Nothing threatens the water quality and the recreational and economic value of Wisconsin's public waters more than the quiet avalanche of nutrients and other pollution that reach our surface waters through rainwater runoff. Among the consequences is the excessive growth of nuisance aquatic plants, including algae and invasives like Eurasian water milfoil. The slow degradation of aquatic habitat that results is gradually diminishing the vast public water resource that is at the foundation of Wisconsin's economy.

Control of runoff pollution is very challenging. It requires changes in agricultural practices to limit runoff of soil, manure, fertilizers and other pollutants. We appreciate the leadership the Legislature has shown in ensuring that funding levels for this critical but unglamorous work is increased in the biennial budget. Runoff control also requires urban dwellers to devote more resources to the control of stormwater, most of which is simply dumped into receiving waters.

One could scarcely exaggerate the scope of concerted actions that will be necessary to protect the quality of the State's waters from the slow deterioration from runoff pollution. But removing phosphates and related Phosphorous compounds from lawn fertilizers isn't like that. It's not expensive. It's not burdensome on property owners or business owners. It doesn't require you to choose between green lawns and blue lakes. It is a practical step to cleaner water that can be taken without goring *anybody's* ox.

Our sister state, Minnesota -- a state with *only 10,000 lakes* and not ear as good fishing -- recently reported on its experience since phosphorous lawn fertilizers were regulated there in 2002. Among key findings in the state's 2007 report[1] were these:

1. P-free lawn fertilizer is widely available in the State's retail stores.
2. P-free fertilizer comprised 82% of lawn fertilizer used in 2006
3. Phosphorous applied through lawn fertilizer decreased 48% between 2003 and 2006.
4. The law created a "teachable moment" for yard care and water quality education.

This bill won't stop the avalanche of runoff pollution. But it will help people to better understand that important dynamic of water quality degradation. Senate Bill 197 takes a sensible approach to reducing phosphorous pollution of lakes and streams. It permits the use of P-containing fertilizers for agricultural use (including sod farms), to establish new lawns, for gardening or in areas (and I am told these are rare) with phosphorous deficient soils. It does not establish an administratively burdensome permit system. It generally requires lawn fertilizer mixes that include Phosphorus to be stored off display floors.

We have been in touch with the Milwaukee Metropolitan Sewerage district, which recycles biosolids from its waste treatment operations to produce Milorganite. WAL would support an amendment to the bill to exempt these products from regulation under the bill.

On behalf of lake management organizations around Wisconsin and the multitudes of residents and visitors who treasure our lakes and streams, the Wisconsin Association of Lakes urges you to take prompt executive action on this bill. We hope that the spring of 2008 will find Wisconsin homeowners applying P-free fertilizer to keep lawns green but not contribute to turning our lakes that color.

Tamara Jackson, WAL's Director of Communications is with me this morning. Tami has been tracking this issue around the state and will address the numerous local county and local initiatives to address this problem. Although these local ordinances and resolutions (including an ordinance adopted by the City of Oconomowoc last week) are encouraging, WAL believes that Phosphorous lawn fertilizers should be regulated consistently statewide.

[1] Minnesota Department of Agriculture, Report to the Minnesota Legislature: Expectations of the Minnesota Phosphorus Lawn Fertilizer Law, March 15, 2007.

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Senate Committee on Environment and Natural Resources
Chair Sen. Mark Miller
Room 409 South
State Capitol
P.O. Box 7882
Madison, WI 53707-7882

Dear Senator Miller and Committee members,

Thank you for the opportunity to voice our support for SB 197.

Reducing and preventing phosphorus runoff is a top priority for lake management organizations. Even small amounts of phosphorus runoff can cause algae blooms and water quality decline, which are unpleasant for all of us who fish, boat, swim, and enjoy Wisconsin's lakes.

It takes 20 parts per million (ppm) of soil phosphorus to grow healthy turf; 25 parts per ***billion*** (a quantity 1000 times smaller) can promote excessive algae growth in lakes. Agricultural soils (see map *Soil Test P in Wisconsin agricultural soils*) in every Wisconsin county have at least 20 ppm of soil phosphorus; the average concentration is 53 ppm. Some counties have significantly higher concentrations, the highest being 160 ppm. Some estimate phosphorus levels in residential Wisconsin lawns have up to twice the amount of phosphorus (105 ppm) than the average farm field. The map (*Phosphorus in Wisconsin lawns*) summarizes results from Wisconsin studies of soil phosphorus levels in lawns.

It is easier to prevent phosphorus from entering our lakes than it is to manage the problems caused once excess phosphorus is in our lakes. It is more expensive and time-consuming to clean up a degraded lake than it is to keep it clean, safe, and healthy for everyone. 90% of Wisconsin's lakes are impaired or threatened by polluted runoff. Wisconsin's lake organizations invest private funds to help manage our public waters. Waterfront property owners are willing to do their part to prevent phosphorus from entering Wisconsin's lakes, but they need your help.

Many of our member lake organizations have been working to develop phosphorus free lawn fertilizer programs for their lakes or working with their town, village, or city governments to pass local phosphorus ordinances. Our members know using phosphorus free lawn fertilizer—unless a soil test confirms the nutrient is needed—is a common sense, simple, and cost effective way everyone can contribute to better water quality.

But local efforts—while widespread across the state—are not enough. Our members are calling for a statewide policy that would ensure consistency across the state for consumers, retailers, and suppliers. Although phosphorus fertilizer ordinances have passed in twenty-five cities, villages, and towns, without a consistent, statewide policy consumers may unknowingly violate local ordinances designed to protect local lakes by buying products in jurisdictions without similar ordinances.

Many counties would like to restrict the unnecessary use and sale of phosphorus lawn fertilizers, and strongly endorse a statewide approach based on Dane County's successful, existing model. To date, nine counties have passed resolutions to follow Dane County's lead on a statewide scale, with two more poised to pass resolutions this fall. Seven local governments and twenty-four statewide, regional, and local conservation groups have passed similar resolutions.

The map (*Support across Wisconsin*) highlights local activity related to phosphorus lawn fertilizer ban by county, and includes local groups working to pass resolutions, county resolutions, existing city, town, and village ordinances, and broad support for a statewide ban from responses to Conservation Congress questions at the April 2007 hearings.

As a statewide organization, we receive several calls a day thanking us for endorsing this bill and keeping our members informed about its progress.

This bill is one positive, easy step towards better management of phosphorus runoff and cleaner lakes for everyone. This bill simply makes the default choice for lawn fertilizer—phosphorus free fertilizer—the right choice for lakes.

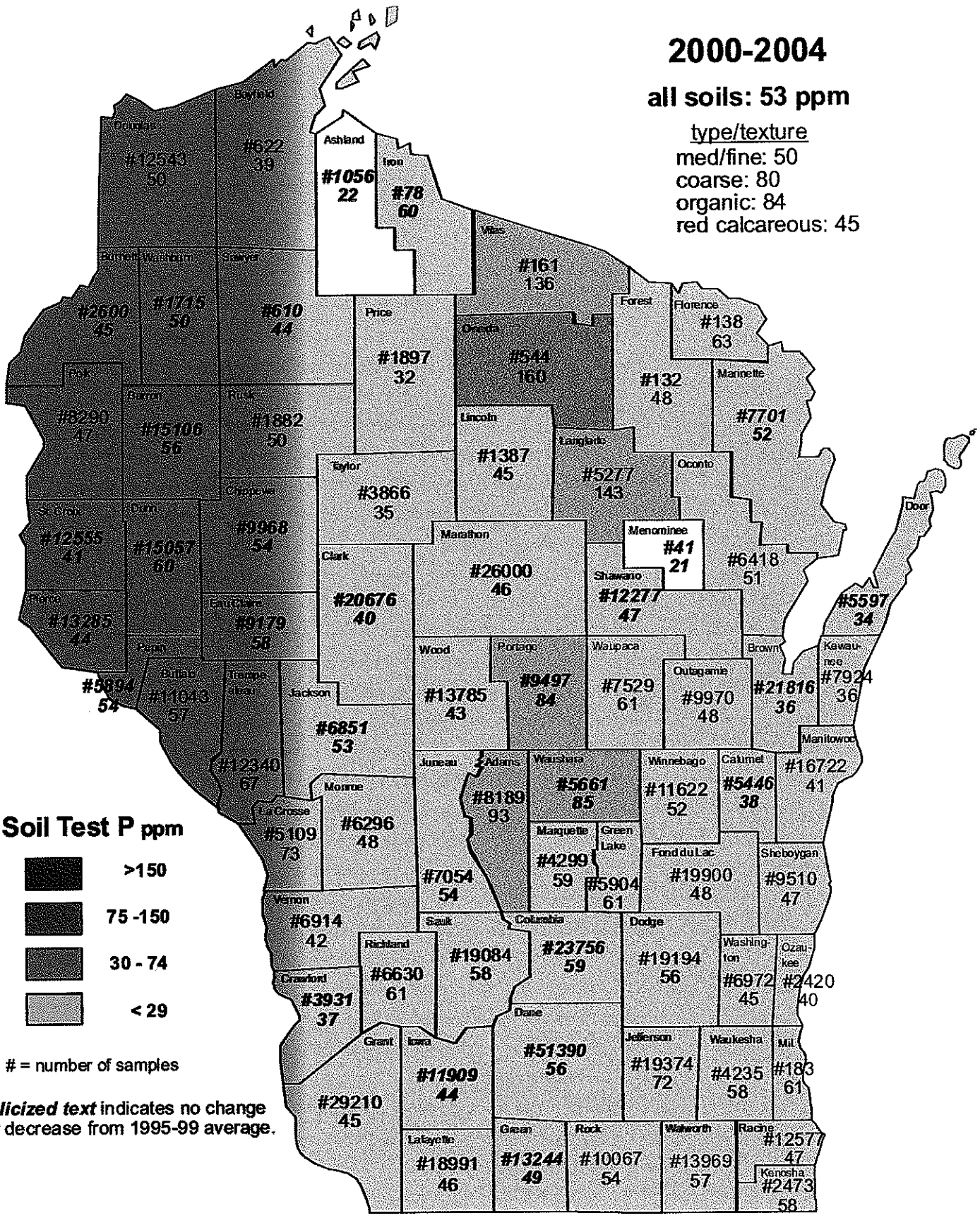
Thank you for your continued leadership and support on this important issue.

Sincerely,

Tamara Jackson

Tamara Jackson
Wisconsin Association of Lakes
Director of Communications

Soil Test P in Wisconsin agricultural soils*



*Soil test data from over 4 million samples collected from Wisconsin farmland. Online at: http://uwlab.soils.wisc.

University of Wisconsin Soil Testing Laboratories

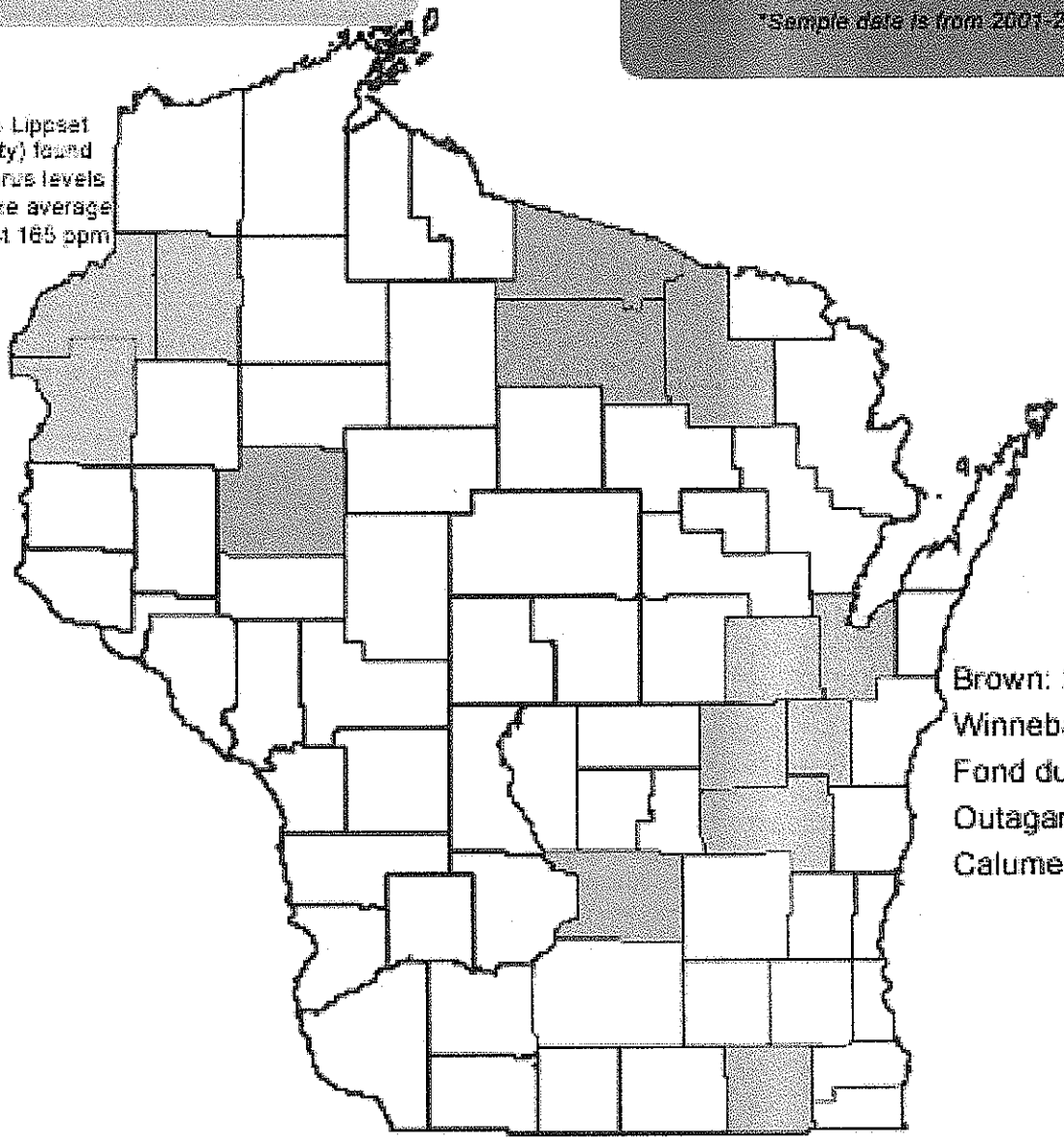
Phosphorus in Wisconsin lawns

Many parts of Northwest Wisconsin have naturally high soil phosphorus levels because of glacial deposits. Applying phosphorus lawn fertilizers is unecessary and increases already high soil phosphorus concentrations.

Northeast Wisconsin's soils commonly contain greater than 120 parts per million (ppm) soil phosphorus, far exceeding the 20 ppm that is adequate to sustain healthy turf grass
See map below for average lawn soil phosphorus levels in five Northeast Counties.*

*Sample data is from 2001-2005 (UW Lab)

Recent samples on Lippset ake (Burnett County) found excessive phosphorus levels n lakeshore soil, the average 77 ppm, the highest 165 ppm



Brown: 200 ppm
Winnebago:175 ppm
Fond du Lac: 148 ppm
Outagamie: 120 ppm
Calumet: 114 ppm

Two USGS studies on Wisconsin lakes found lawns send more phosphorus to the lake (10-100 times more than wooded sites) and lawn fertilizer choice makes a difference (lawns using phosphorus fertilizer produced 50% more phosphorus runoff)

A sampling of Dane County lawn soils found an average soil phosphorus concentration of 54 ppm. Some lawns had up to 438 ppm.

Support across Wisconsin

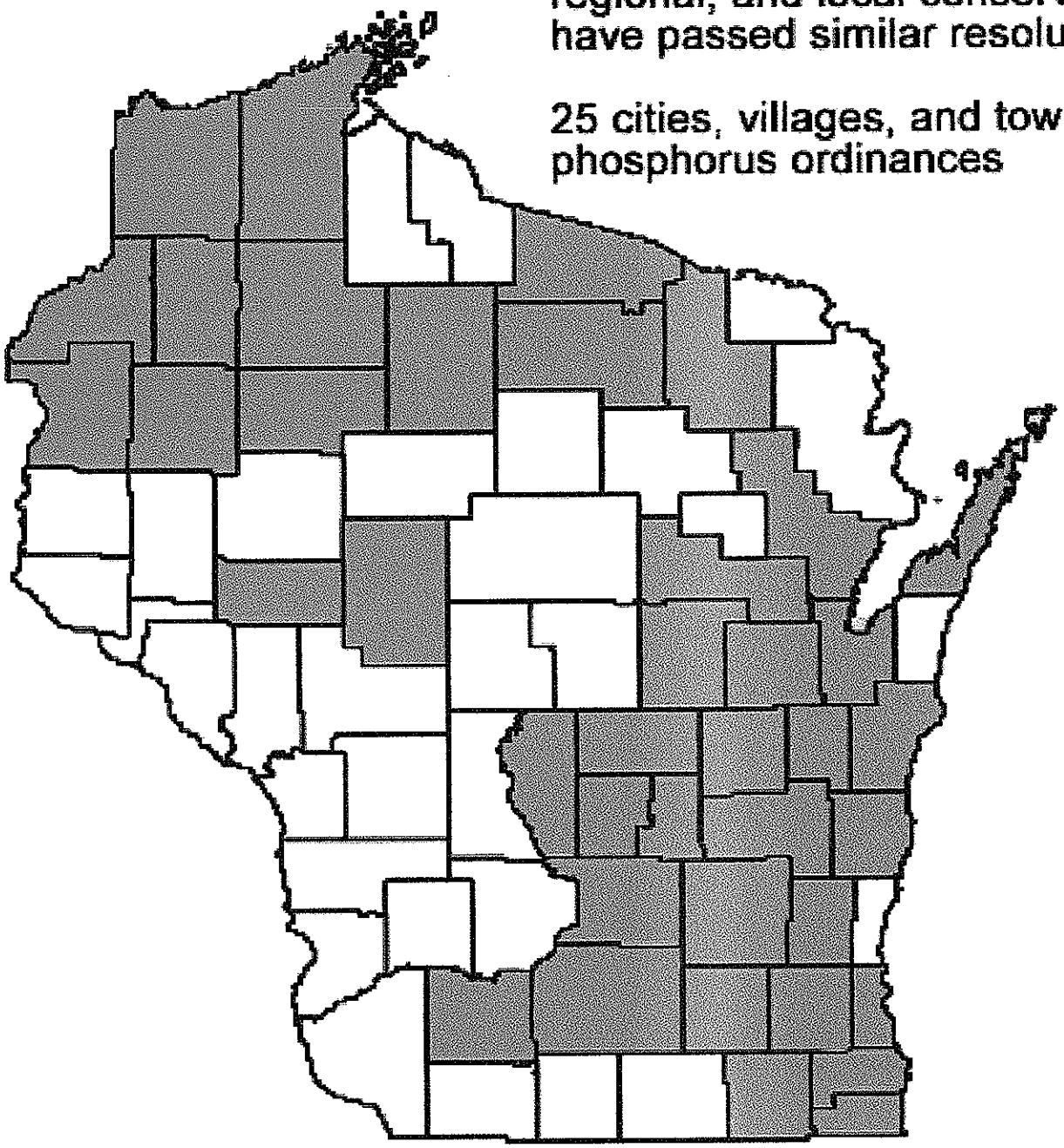
for a statewide ban on phosphorus in lawn fertilizer (based on Dane county's existing ordinance)

Activity in 40 of 72 counties

9 counties have passed resolutions to follow Dane County's lead on a statewide scale (2 more poised to pass resolutions this fall)

7 local governments and 24 statewide, regional, and local conservation groups have passed similar resolutions.

25 cities, villages, and towns passed phosphorus ordinances



Support across Wisconsin

(last updated August 27, 2007)

Counties that have a county-wide ordinance banning phosphorus in lawn fertilizers

- Dane
  (Dane county is uniquely able to pass a ban at the county level because of the authority the legislature granted the Dane County Lakes and Watershed Commission)
- Polk (in shoreland areas only)

Counties, local governments, and groups that have passed a resolution supporting a statewide ban on phosphorus in lawn fertilizer (modeled after Dane County's existing ordinance)

Counties

- Brown County
- Dodge County
- Door County
- Columbia County
- Eau Claire County
- Jefferson County
- Manitowoc County
- Oneida County
- Waupaca County

Local Governments

- Town of Westpoint (Columbia County)
- Village of Cambria (Columbia County)
- Town of Lewiston (Columbia County)
- Town of Lodi (Columbia County)
- Town of Sevastopol (Door County)
- Town of Lake Mills (Jefferson County)
- Town of Oakland (Jefferson County)

Statewide and local groups

- Wisconsin Association of Lakes (statewide)
- Wisconsin Land and Water Conservation Association (statewide)
- Lake Michigan Association of Land Conservation Committees (regional group)
- Great Lakes Non-Point Abatement Coalition (regional group)
- Rock River Coalition (regional group)
- Land Conservation Committee of Calumet County,
- Land Conservation Committee of Manitowoc County
- Lake Winnebago Land and Water Conservation Association

- Manitowoc County Lakes Association
- Rusk County Waters Alliance
- Sawyer County Lakes Forum
- Washburn County Lakes and Rivers Association
- Vilas County Lakes Association
- Lake Winnebago Association
- Bayfield County Lakes Forum (Bayfield County)
- Cedar Lake Sanitary District (Washington County)
- Lake Nancy Protective Association (Washburn County)
- Lake Ripley Management District (Jefferson County)
- Lake Sinissippi Improvement District (Dodge County)
- Beaver Dam Lake Improvement Association (Dodge County)
- Fox Lake Inland Lake Protection and Rehabilitation District (Dodge County)
- Green Lake Sanitary District (Green Lake County)
- Lake Puckaway Protection and Rehabilitation District (Green Lake County)
- Green Lake Association (Green Lake County)

Cities/Villages/Towns that have passed phosphorus lawn fertilizer ordinances

- City of Madison (Dane County)
- Village of Silver Lake (Kenosha County)
- Village of Lake Paddock (Kenosha County)
- Village of Pleasant Prairie (Kenosha County)
- Village of Twin Lakes (Kenosha County)
- Town of Randall (Kenosha County)
- City of Amery (Polk County)
- Town of Dover (Racine County)
- Town of Waterford (Racine County)
- Town of Burlington (Racine County)
- Town of Norway (Racine County)
- Village of Wind Point (Racine County)
- Crystal Lake Management District (Sheboygan County)
- City of Delafield (Waukesha County)
- Town of Delafield (Waukesha County)
- City of Pewaukee (Waukesha County)
- Village of Pewaukee (Waukesha County)
- Village of Lac La Belle (Waukesha County)
- Village of Twin Lakes (Waukesha County)
- Town of Oconomowoc (Waukesha County)
- Lake Beulah Management District (Waukesha County)
- Town of Delavan (Walworth County)
- City of Delavan (Walworth County)
- Town of La Grange (Walworth County)
- City of Elkhorn (Walworth County)

Counties and groups considering passing resolutions to support a statewide ban on phosphorus in lawn fertilizer (modeled after Dane County's existing ordinance)

- Barron County
- Burnett County
- Sawyer County
- Washburn County
  (resolution passed County AG and LCC Committee, resolution going to full County board at September meeting).
- Wisconsin Counties Association
  (resolution passed Land Use committee in July, acting on the resolution in October)

Cities/Villages/Towns interested in passing phosphorus lawn fertilizer ordinances

- Town of Rome (Adams County)
- Village of Greenville (Outagamie County)
- Town of Elkhart lake (Sheboygan County)
- Town of East Troy (Waukesha)
- City of Oconomowoc (Waukesha)
- Village of Nashotah (Waukesha)

Groups/local governments in the process of developing resolutions in support the statewide initiative

- Burnett County Lakes and Rivers Association
- Douglas County Lakes and Rivers Association
- Price county Lakes and Rivers Association
- Polk County Lakes and Rivers Association

Lake Sinissippi Improvement District
PO Box 89
Hustisford, WI 53034

Senate Committee on Environment and Natural Resources
Public Hearing on SB 197
Tuesday, August 28, 2007, 10:00 AM, Room 300 Southeast, State Capitol

Testimony of Gregory M. Farnham, Commissioner
In support of SB 197 relating to: restrictions on use and sale of fertilizer containing phosphorus and other lawn fertilizer and providing a penalty.

Chairman Miller and Committee Members:

I am a commissioner of Lake Sinissippi Improvement District in Dodge County, Wisconsin, a public inland lake protection and rehabilitation district.

The water quality of Lake Sinissippi is very poor as reflected in undesirable blooms of both green and blue-green algae, low water clarity, high values of chlorophyll *a* and low concentrations of dissolved oxygen. During a previous summer I had the opportunity to fly over Lake Sinissippi, Beaver Dam Lake and Fox Lake and observe the algal blooms in full effect. Our lakes appear pea-soup green even from 3,000 feet!

Water quality data developed by the Lake District and earlier data of the US Geological Survey and Wisconsin Department of Natural Resources present a compelling and unequivocal case to substantiate the fact that Lake Sinissippi, the Rock River and other tributary waters are impaired by nutrient enrichment resulting from excessive levels of phosphorus.

Total phosphorus concentrations in excess of 150 ug/l generally indicate very poor water quality. Phosphorus values in our lake range from 230 to 400 ug/l, more than twice the benchmark concentration. Phosphorus values in the Rock River north of the lake are also very high, ranging from 320 to 380 ug/l.

Lake Sinissippi is one of many impaired waterways in the state that appear on the 303(d) list of the Federal Water Pollution Control Act for reasons of water quality impairments due to pollution from phosphorus.

Our Lake District has worked on the local level for the past 3 years to encourage Dodge County to enact an ordinance to limit sale and use of phosphorus-containing lawn fertilizer. We are aware that similar actions have been attempted in Jefferson County and other counties. This follows the successful work in 2004 by Dane County to restrict sale and use of lawn fertilizer with phosphorus and thereby reduce the amount of phosphorus runoff into streams and lakes.

In May 2007 the Dodge County board passed a resolution requesting state action to ban use of phosphorus lawn fertilizer. Action on a county ordinance has not been forthcoming, however, due to the fact that corporation counsel does not believe that our county has the same statutory basis as Dane County to pass an ordinance to protect our surface waters from excessive phosphorus runoff. This is most unfortunate. The water resources of Dodge County and of the other 70 counties of Wisconsin need the same care and protection as those of Dane County.

You are undoubtedly aware that Minnesota has had a statewide restriction on use of phosphorus lawn fertilizer since 2005. We have seen reports from Minnesota, as well as from Dane County, that significant improvement in the quality of surface water occurs in areas where the use of lawn fertilizer containing phosphorus is restricted.

The water conservation policy of our state, as articulated in Chapter 92, Wis. Stats., is to halt and reverse the pollution of state water resources. Action to limit sale and use of phosphorus-containing lawn fertilizer would represent a critical step forward to help improve the health and quality of our streams, rivers and lakes.

We support Senate Bill 197 to restrict use and sale of lawn fertilizer containing phosphorus on a statewide basis.

Thank you for the opportunity to provide comments.

Gregory M. Farnham
Commissioner

TAINTER/MENOMIN LAKE IMPROVEMENT ASSOCIATION, INC.

People uniting to protect our resources

P.O. Box 185
Menomonie, WI 54751

August 27, 2007

To whom it may concern:

We are writing this letter to give our full support to Senate Bill 197.

The Tainter/Menomin Lake Improvement Association, Inc. strives to improve water quality, enhance wildlife and education. Senate Bill 197 would greatly assist in helping us achieve these goals. Phosphorous is one of the main pollutants that affect our lakes. The majority of soils in the watershed have a natural inheritance of high phosphorous levels, consequently, we recommend that no additional phosphorous is necessary to maintain turf, unless a soil test indicates a need for phosphorous or the establishment of a new turf seeding.

Soil erosion and stream bank erosion are the largest source of how phosphorous enters water bodies. By limiting and managing fertilizer properly and by applying soil conservation practices, water quality can greatly be benefited.

Therefore we fully support having phosphorous free fertilizer for lawns and support Senate Bill 197.

Veterinary Nutritional Consulting
William G. Olson D.V.M, PhD
Diplomate, American College of Veterinary Nutrition

E6395 836th Ave.
Colfax, WI 54730

Phone 715-962-2325 e-mail olsonlb@charter.net

August 27, 2007

To whom it may concern:

I am writing this letter to give my full support to Senate Bill 197.

I retired from the College of Veterinary Medicine at the University of Minnesota in 2001 after 25 years of teaching research and outreach activities in the area of clinical nutrition. In 1972, I received my PhD from the U of Wisconsin, in Dairy Science, studying with Dr. Neil Jorgensen and Dr. Hector DeLuca. In my years at the University of Minnesota, Calcium Phosphorus and Vitamin D metabolism and metabolic diseases associated with these and other minerals were a principle area of interest and research. These minerals come mostly from farm grown grains and forages. In the past decade, the dairy industry has greatly reduced the amount of phosphorus in dairy cow rations and I am aware of the soil nutrient management plans. Dr. Satter (deceased) and associates of the Dairy Science Department and the USDA Forage Research Center were leaders in getting the Phosphorus in dairy rations reduced from .45-.5% or more down to less than .4%. In Minnesota, the ban on P in lawn fertilizers has been in existence for many years.

Currently, I am a member and board member of the Tainter Menomin Lake improvement Association, and have been taking lake samples for the last 3 years for the DNR lake monitoring project. I am fully aware of the sources of Phosphorus that get into our waterways. Erosion of river banks and soil runoff from farm land are the biggest sources unless there our strict conservation methods in place. Property owners along our waterways are also a significant source, if they do not follow the buffer zone guide lines and/or they apply fertilizer containing Phosphorus to their turf.

Another source of Phosphorus not yet attended to is the use of dish washer soaps that contain Phosphates.

Anything that enters a storm drain goes directly to a local lake or river.

It does not go to a waste water treatment facility.

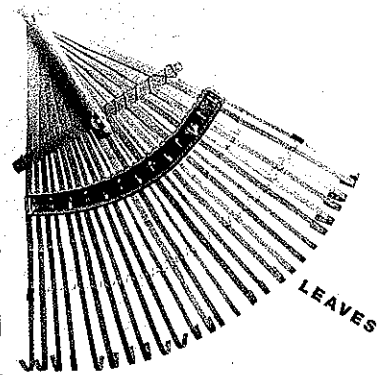
Do you know you live on waterfront property? You do if there is a storm drain nearby! Storm drains carry runoff water directly to lakes and rivers. Whatever washes off your yard and street runs directly into these waters. That includes lawn fertilizer, grass clippings, pet waste, and tree leaves and seeds–all sources of phosphorus, the plant nutrient that turns lakes and rivers green with algae.

Keep your runoff clean!

Keep our lakes and rivers clean!

REMOVE LEAVES FROM THE STREET

- Rake leaves, seeds and grass clippings out of the street and gutter.
- Compost on site, bag for collection, or take to community compost program.



LEAVES END UP IN THE STORM SEWER.....

PREVENT EROSION

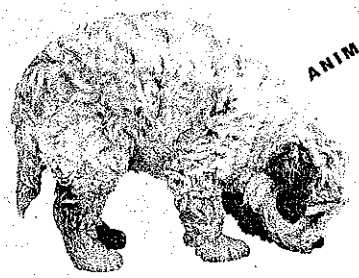
- Phosphorus attaches to soil. Keep soil from washing into the street.

FERTILIZE THE LAWN, NOT THE LAKES AND RIVERS

- Choose a zero-phosphorus fertilizer. Many lawns have adequate soil phosphorus and will remain healthy without adding more.
- If you think your lawn needs phosphorus, test your soil first. For information call INFO-U at 612-624-2200, message 468 or visit soiltest.coafes.umn.edu.
- Sweep spilled fertilizer off paved surfaces.
- Remember, compost and manure contain phosphorus too.

CLEAN UP AFTER PETS

- Scoop the poop. Pet waste contains phosphorus as well as harmful bacteria.
- Don't feed the geese.



ANIMAL WASTES END UP IN THE STORM SEWER.....

GRASS CLIPPINGS END UP IN THE STORM SEWER.....

KEEP THE PAVEMENT CLEAN

Sweep up grass clippings, soil, fertilizer, sand and salt from driveways, sidewalks, and streets.

You may be fertilizing more than your grass.

The storm drain in your street is a link to our lakes and rivers. The choices you make when caring for your lawn directly affect water quality.

A common cause of lake and river pollution is phosphorus runoff. In response to this, Minnesota has a law restricting the use of phosphorus lawn fertilizer. Although phosphorus is important for grass growth, many lawns have adequate soil phosphorus and do not need further phosphorus fertilization. If you suspect your lawn is in need of phosphorus, soil test first to make sure before using a phosphorus lawn fertilizer.

Phosphorus turns lakes and rivers green. Phosphorus stimulates the growth of algae in lakes and rivers. This crowds out other water plants and reduces oxygen available to fish. The result is unattractive, foul-smelling water that is bad for fish, wildlife, and humans.

Nitrogen, not phosphorus, greens up grass. Phosphorus-free lawn fertilizer still contains nitrogen, the plant nutrient that greens up grass.

To keep our lakes and rivers healthy, we need to manage phosphorus carefully. Read on to learn how you can reduce phosphorus runoff from lawn fertilizers and other sources!

Minnesota Phosphorus Lawn Fertilizer Law – January 1, 2005

Fertilizers containing phosphorus cannot be used on lawns in Minnesota unless the following exceptions apply:

- **A new lawn is being established by seeding or laying sod.**
- **Soil testing shows need for phosphorus fertilization.**
- **Fertilizer is being applied to a golf course by trained staff.**

For soil testing information, contact the University of Minnesota Soil Test Lab at 612-625-3101 or visit them at their soiltest.coafes.umn.edu website.

Look for the middle number!
A string of three numbers on a fertilizer bag shows its analysis – the middle number being phosphate (phosphorus) content. A "zero in the middle" means phosphorus-free fertilizer.

More information on the law is available at the Minnesota Department of Agriculture website www.mda.state.mn.us; click on "Water & Land" then on "Lawn Care & Water Quality."

MINNESOTA WATER
LET'S KEEP IT CLEAN

www.cleanwatermn.org

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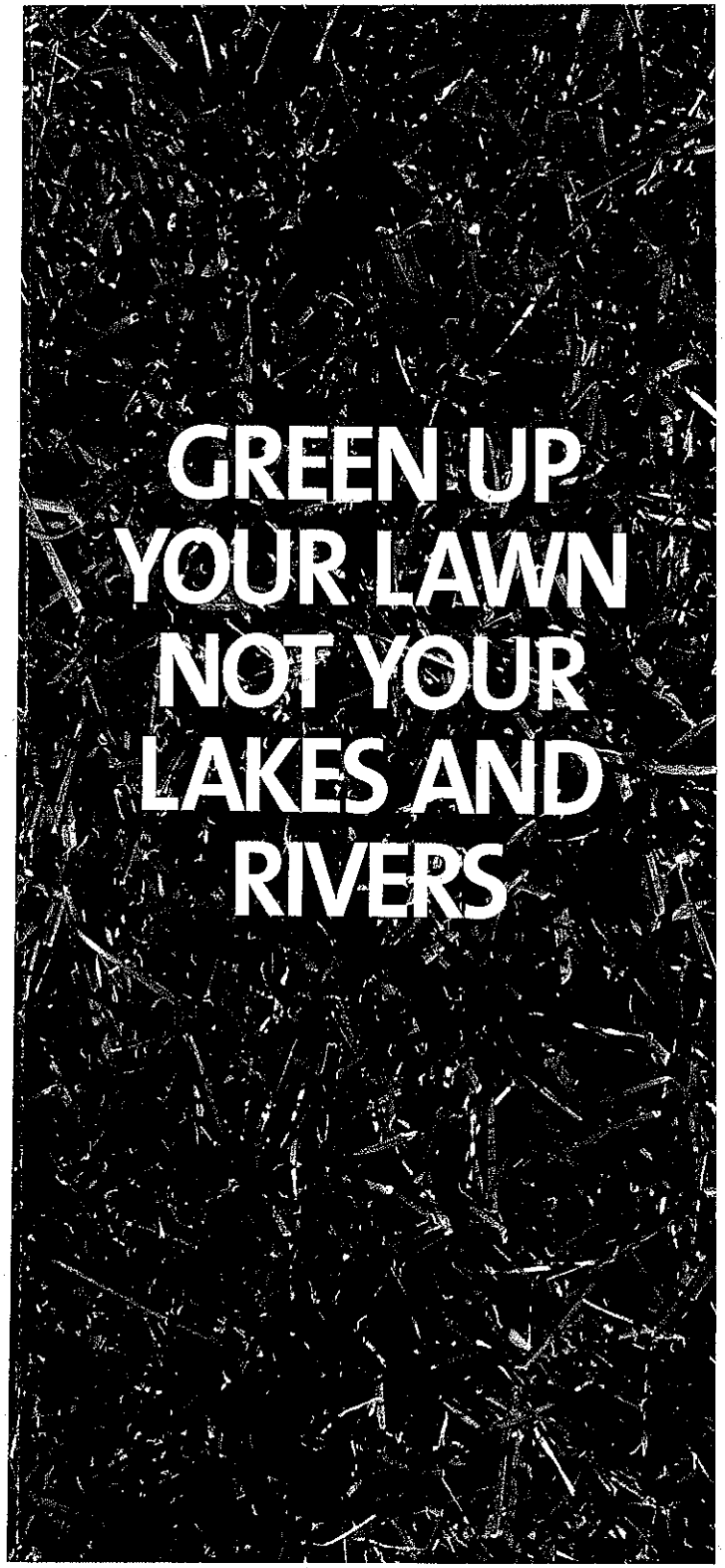

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(414) 328-5600

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(262) 886-7900

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(262) 662-5800

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(262) 253-1147

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(414) 761-5400

Waukesha
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(262) 797-7070

Oconomowoc
1570 Unity Drive
(262) 560-4191

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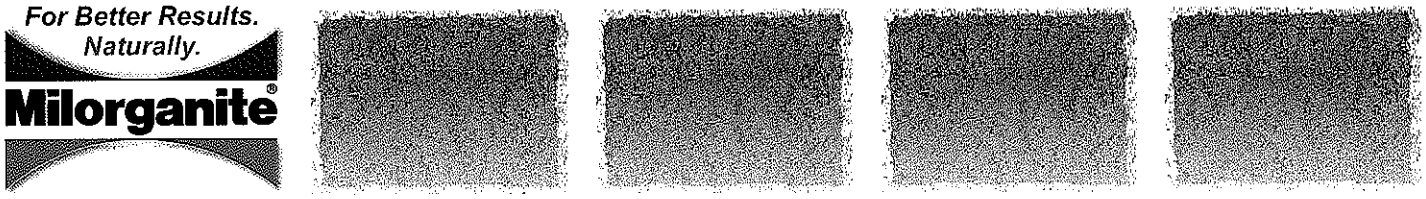

To: Senate Committee on Environment and Natural Resources
August 28, 2007 Public Hearing

From: Thomas J. Crawford, Senior Staff Attorney
Milwaukee Metropolitan Sewerage District and Milorganite®

Re: Discussion of the "Milorganite®" substitute amendment to **2007 A.B. 396 and SB 197**.

The Milwaukee Metropolitan Sewerage District works to reduce phosphorus and other Nonpoint sources pollutants which adverse impact water quality.

SB 197 pursues the water quality goal with the unintended consequence of putting Milorganite® out of business in our home state. A Milorganite® Substitute Amendment is suggest which achieves the dual environmental policies of beneficial recycling of biosolids (a/k/a sewage sludge) while minimizing application of water-extractable phosphorus by consumers to residential turf.

The goals are: (1) reduce phosphorus runoff to improve water quality, (2) make the law simple, clear and uniform, and (3) reduce "needless" phosphorus fertilizer use. The goals weave together the newest urban stormwater regulations (NR 151 and NR 216), with longstanding state fertilizer regulations and protect the unsophisticated consumer from paying for plant nutrients they do not need. The Milorganite® substitute amendment accomplishes each goal with an added emphasis on individual responsibility that "each before his own door sweep and the village will be clean."

Turf is Turf, no more needs to be said.

The definitions are deleted. "Turf" is used in §94.38(10). Turf is not a new technical word or a term with a different meaning than the dictionary. The turf definition includes land use exemptions (wrong place for agricultural exemptions, redundant and repetitious with later expressions of the same exemptions). The bill defined turf as "closely mowed, managed grass" and thereby exempts "unkept" lawns that do not achieve "perfect lawn" quality standards.[1]/ Every work in a statute is presumed to mean something, not extraneous "surplusage." Therefore, the legislature must mean that "loosely" and "infrequently" mowed grass is exempt and outside the special meaning given to turf. The descriptive adjectives are not helpful.

---

[1]/ See, David Mello, *Picture Perfect* or Ted Steinberg, *American Green: The Obsessive Quest for the Perfect Lawn* (2006).

Milorganite - MMSD 260 W. Seeboth Street Milwaukee, WI 53204
Phone: (414) 221-6810 (800) 287-9645 Fax: (414) 221-6818
info@milorganite.com www.milorganite.com

Degrees of mowing do not matter and are not Helpful.

The descriptive phase "closely mowed, managed grass" appears in the Minnesota Phosphorous turf fertilizer law, 18C.60(1), Minn. Stats. Minnesota's law is the source of the poor drafting. There is no reason to copy a definition at odds with the every day language. The every day meaning of turf is turf..

State-wide uniformity is essential.

Currently, local governments are preempted from regulating Milorganite® pursuant to §283.82, Wis. Stats. Preventing local governments from prohibiting what the State has expressly permitted is a fundamental policy. Preemption of local government regulation of the fertilizer business is added and is germane under the relating clause. Minnesota preempts local government regulation because the goals of the law are statewide and uniformity is required. Replacing disparate local ordinances on phosphorus content of fertilizers with a state-wide policy will ensure that no-phosphorus fertilizers are carried at all lawn and garden stores without regard to municipal boundary.

New Prohibitions on common sources of urban runoff.

Prohibited practices are collected in one section and apply to all nonagricultural fertilizer materials, not limited to low phosphorus fertilizers. The prohibited practices are pathways for urban nutrients to be transported to surface waters from lawn care activities. Behavior modification is necessary to encourage on-site composting of yard waste (the end product of fertilizer use), better care and clean up by the home applicator, and respecting a safety buffer between fertilizer application and water. Municipalities with new urban stormwater permits have a duty to educate the public on these practices.

Minimum Riparian buffer strip.

A prohibition on fertilizer use within 20 feet of turf subject to flooding and the waters of the state is added. There is no specific science for a twenty feet buffer rather than 25 or 50 feet. Twenty feet is suggested as an effective buffer.

Plant available Phosphates and Organic Slow Release Nitrogen

Organic materials and organic fertilizers contained in blended commercial fertilizers need a *de minimis* phosphorus standard that is not misleading and promotes beneficial use of recycled organic materials. Minnesota defines phosphorus-free as meaning less than 0.67% phosphate (= 0.29% total phosphorus).[2]/ This is the standard adopted by the American Association of Plant

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[2]/ N-P-K% = the traditional fertilizer system of comparing of primary nutrients quantity, expressed as a percentage "as is" by weight in the bag, according to uniform state fertilizer labeling laws.

N means Total Nitrogen;

P (Phosphorus) means available phosphoric acid, $P_2 0_5$, a/k/a phosphorus pentoxide; and,K (Potassium

Food Control Officials (AAPFCO), the organization that recommends uniform state fertilizer regulations and definitions.

Organic materials always contain some phosphorus. To focus on lawn fertilizers, Minnesota excludes from phosphorus-free enforcement products that obviously are intended for garden or other non-turf uses.[3]/ The rule-of-thumb is that products with less than 18% nitrogen were not "competitive" as turf fertilizers. Milorganite® 6-2-0 was not classified by Minnesota as exclusively a turf fertilizer. True enough, slow release nitrogen Milorganite® with 4% Iron has many non-turf uses, but it is advertised as an "idiot proof" grass fertilizer.

Under the new Florida labeling rule for turf fertilizers, Milorganite® 6-2-0, with 5.5% slow release nitrogen, will be labeled as "low phosphate."[4]/ Low phosphate means no more than 0.25 pounds of available phosphoric acid, P_2O_5, per 0.5 pounds of readily available nitrogen/1,000 sq. ft.

Environmental lab certification is unnecessary.

The requirement that phosphorus soil testing be limited to state certified labs is deleted. Lab certification is important to assure accuracy of evidence in environmental enforcement, a consideration not present in the case of individual lawn care. Nutrient soil testing kits are available for lawn and garden. The kits are simple to use and provide data that is reliable enough for top soil gardening. Some kits allow many tests of soil nutrients in different areas of the yard, providing more representative sampling.[4]/

The turn-around for a residential soil sample submitted to a certified lab is 2 to 3 months in the spring. People not likely to wait half of the growing season to address a nutrient deficiency. A soil testing kit is proof of due care by an individual conscientiously seeking to avoid needless application of phosphorus.

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means Potassium oxide (K_2O), a/k/a soluble Potash. Phosphorus and Potassium are labeled as oxides.

[3]/ *Report to the Minnesota Legislature: Effectiveness of the Minnesota Phosphorus Lawn Fertilizer Law* (March 15, 2007) Minnesota Department of Agriculture Fertilizer Division, page 11 (noting the market shift from 44% to 82% phosphorus-free lawn fertilizer between 2003 and 2006).

[4]/ Florida Dept. of Agriculture and Consumer Services, Rule 5E-1.003(2), Labeling Requirements for Urban Turf Fertilizers, vol. 38, No. 18, Fl. Adm,. Weekly, May 4, 2007. See also the Florida Consumer Fertilizer Task Force developing a new state law restricting nonagricultural fertilizer use to achieve water quality standards. Consensus.fsu.edu/fertilizer-task-force/index.html.

[4]/ Rapitest™ Soil Test Kit ($16.99) contains 40 tests, 10 each for pH, nitrogen, phosphorus and potassium.

All Agriculture use and production is exempt, don't need examples.

Section (4)(a) excludes from the phosphorus limit agricultural uses and production. It is not necessary to "laundry list" examples of agricultural use or production because the terms are broadly defined in the Right to Farm law, §823.08, and Farmland Preservation law, §91.01(1), Wis. Stats.

Continue the policy of sustainable beneficial use of biosolids

Biosolids and other organics are exempt to achieve the dual policy goals of prompting beneficial use while minimizing needless phosphorus application to turf. The Dane County Ordinance exempts biosolids from the phosphorus ban, the City of Madison Ordinance does not. In practice, neither the City of Madison nor the State of Minnesota enforce phosphorus free limits against biosolids.

No risk of needless phosphorus use

Professionals in the management of turf are exempt because the risk of needless application of phosphorus is minimal. Under the new stormwater regulations, municipalities are required to have a nutrient management plan for publicly owned turf, e.g., schools, playgrounds, parks, boulevards, etc.

Delete the Scarlet Letter Treatment.

The prohibition on retail display of a one-ton-skid of turf fertilizer with trace levels of phosphorus is deleted. Milorganite® 6-2-0 is displayed prominently as a sale item to draw consumers into lawn and garden centers. Prohibiting public display would destroy Milorganite® sales in Wisconsin and is usually Puritanical (a strict moral view of pure and proper behavior).

Strict liability, not state of mind.

The distinction between intentional and accidental prohibited fertilizer use is deleted. Proof the mental state should not be an element of these crimes. Strict liability applies. Reckless disregard for the consequences of phosphorus fertilizer application is an appropriate consideration at the penalty stage, after a violation has been proven.

Warn first, punish later.

The penalty clause is altered. Department of Agriculture, Trade and Consumer Protection (DATCP) general enforcement authority over fertilizer use is referenced with two caveats. First, educational is put before punishment. A warning is required as a precondition to prosecution. Minnesota and its local governments have not reported a single instance of enforcement since phosphorus free fertilizers became universally available at lawn and garden retailers. Secondly, the duty to clean-up your mess and mitigate harm to the waters of the state is a factor to be considered in imposing a forfeiture within the range of discretion permitted by §94.64(12)(a).

Use fertilizer on hand, don't make a waste.

An exemption is added to the effective date section to avoid wasting fertilizer already in the possession of consumers. Minnesota found that consumers brought phosphorus fertilizers (without a herbicide ingredient) to household hazardous waste collections, an expensive disposal option. Phasing out high phosphorus fertilizers by application to soil is better environmental management than "disposal" as a solid or hazardous waste.

Plant Available Phosphorus.

Less than 1% of the total P in Milorganite® is plant available. In contrast, 80% to 95% of the total P in a triple super phosphate (TSP) commercial fertilizer is plant available. Commercial phosphorus compounds are extremely water soluble.

The total phosphorus in biosolids, in particular heat dried Milorganite®, may become plant available over time as the bond of Iron (Fe),Aluminum (AL) and phosphates weather. The release is very slow. Low plant available phosphorus promotes plant utilization of P leaving less soluable P in the soil for potential losses due to rainfall or leaching.

Phosphorus Source Solubility

A summary taken from Environmental Impacts of Land Applying Biosolids

George A. O'Connor and Sarah L. Chinault
University of Florida

Some P-sources contain less soluble P than others and represent less environmental hazard because less P is available at any one time to leaching and runoff events. For example, the data in **Figure 1** show that fertilizers typically contain the greatest **percentage of total P that is soluble in a water extract (PWEP).** Animal manures contain intermediate amounts of PWEP, and most biosolids the least.

Not all biosolids are the same, however, as demonstrated in **Figure 2**. Biosolids processing treatment (heat-drying, composting, or biological P removal) can dramatically alter P solubility. Those biosolids with high total Fe and Al concentrations are particularly low in soluble P.

As a group, biosolids have less soluble P than manures and fertilizers, and less environmental liability. Thus, P losses tend to be greatest with fertilizer, less with manure, and least with biosolids P sources (**Figures 3 and 4**).

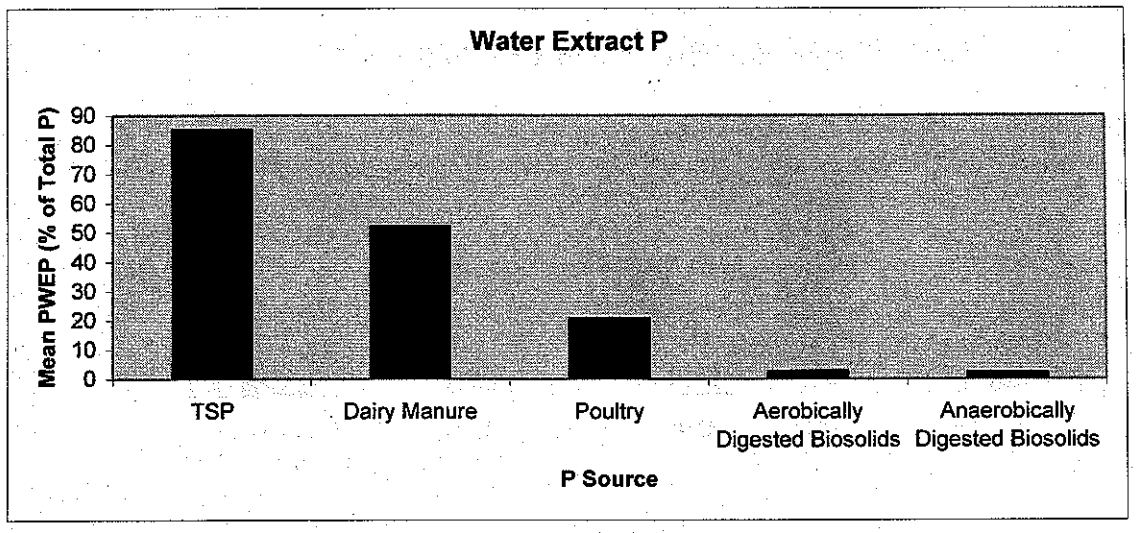

Figure 1. Comparison of percent water extractable P from fertilizer (TSP), dairy and poultry manures, and 10 aerobically and anaerobically digested biosolids (Brandt, *et al.*, 2004).

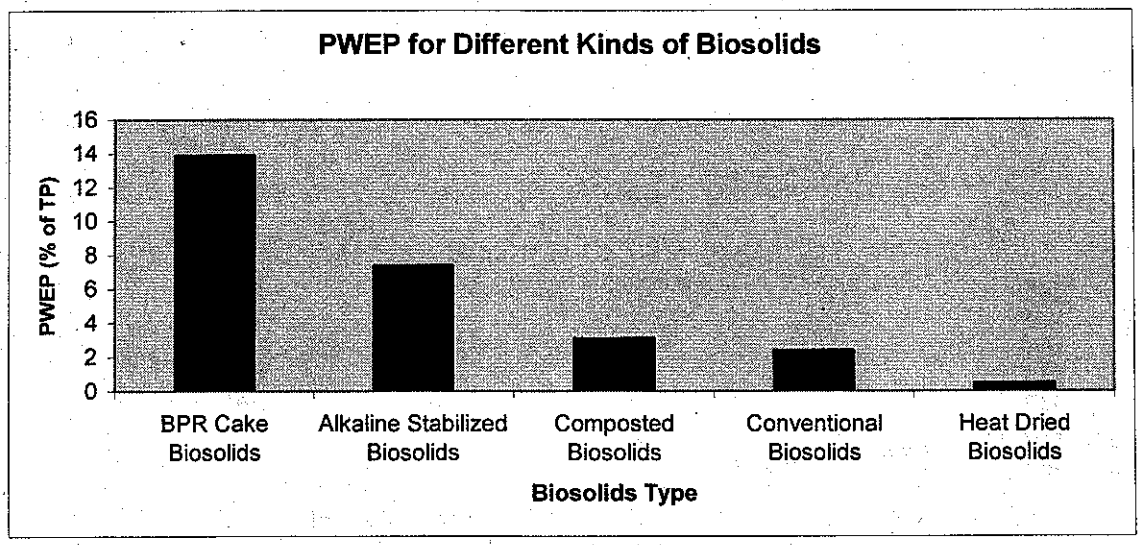

Figure 2. PWEP (% of Total P) of different biosolids types, including BPR, alkaline stabilized, composted, conventional and heat dried biosolids (Brandt, *et al.*, 2004).

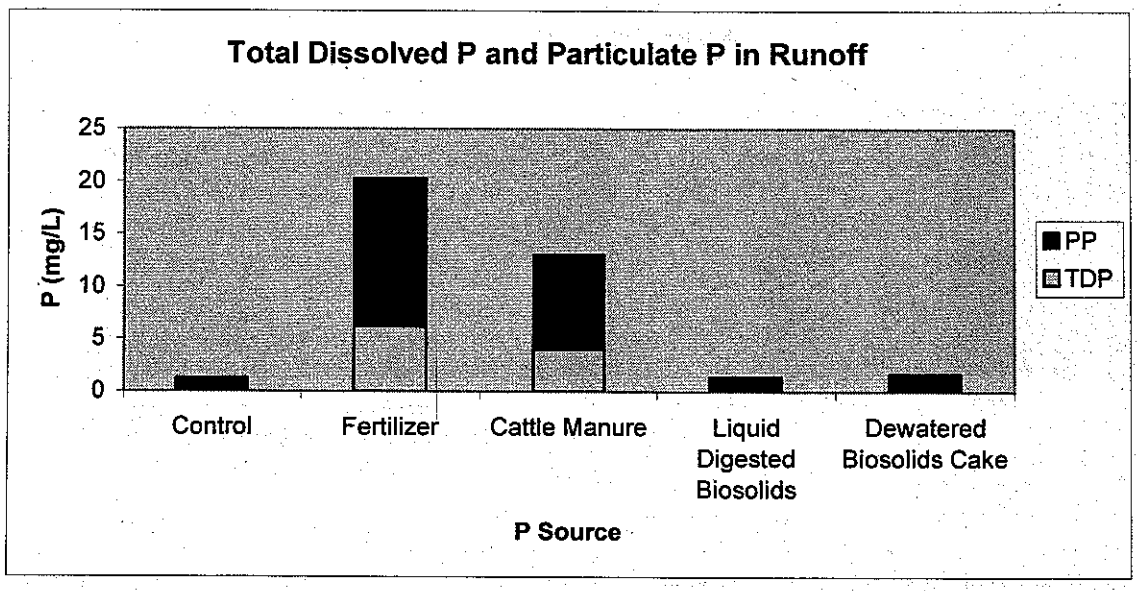

Figure 3. Particulate P (PP) and total dissolved P concentrations in runoff collected after a storm event. (Withers, *et al.*, 2001).

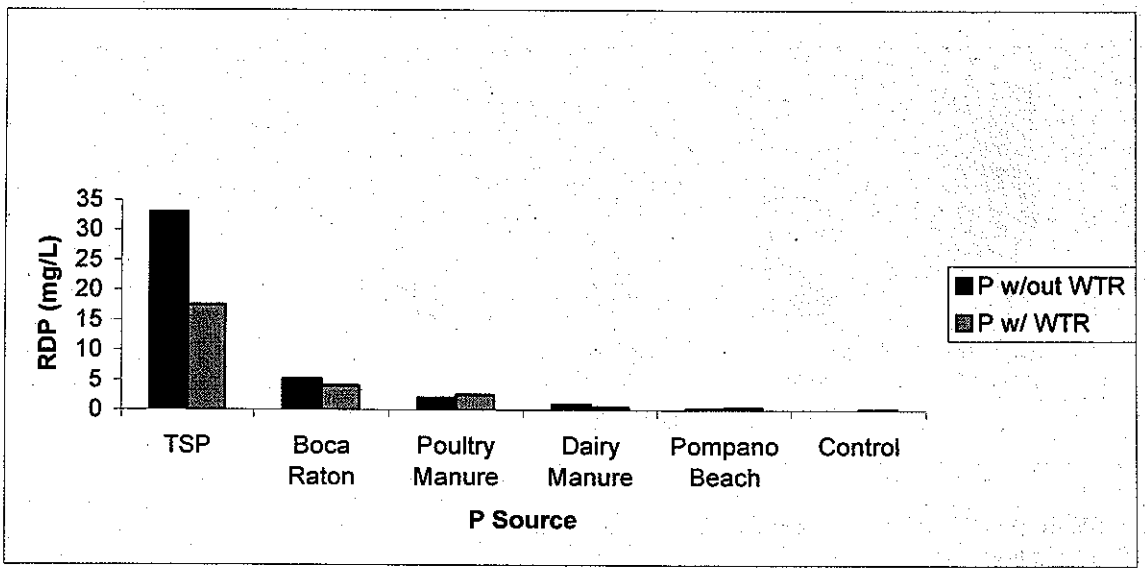

Figure 4. Runoff dissolved P for several P sources when surface applied at high P application rate with and without water treatment residuals (O'Connor and Elliott, 2002).

Plant Availability of P:

Another way P-sources (fertilizer, manure, and biosolids) differ is in the fraction of total P that is plant available. Nutrient availability is a complex function of many factors, but nutrient source solubility and release rate are critical. Thus, P-sources of lower solubility or slower release rates have lower P availabilities. P-fertilizers are designed to have high solubility and quick P release.

Research has shown that most biosolids contain P that is only about 40-50% as available as fertilizer-P (**Figure 6**). Some **biosolids-P sources (BPR materials)** are more available, and **some less available (heat-dried materials high in total Fe and Al), than the average [that is, Milorganite®].**

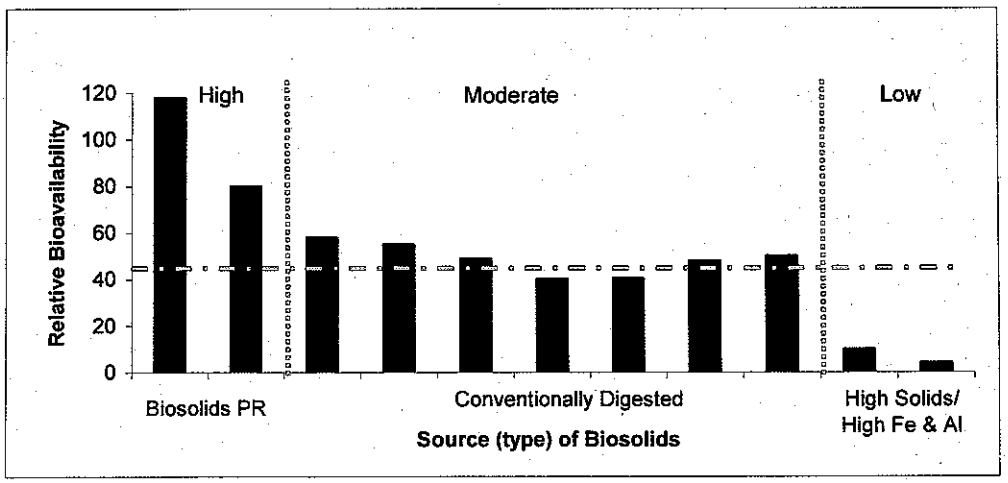

Figure 6: Phytoavailability of various biosolids sources (O'Connor, *et al.*, 2004).

For Better Results. Naturally.

Milorganite®

Milorganite® Substitute Amendment 1 to 2007 Assembly Bill 396 and Senate Bill 197

An Act **to create** 94.643 of the statutes; **relating to**: restrictions on the use and sale of fertilizer containing phosphorus and other lawn fertilizer and providing a penalty.

Section 1. 94.643 of the statutes is created to read:

94.643 Restrictions on Turf Fertilization.

(1) Local Government Fertilizer Regulation Prohibited.

(a) Local governments are prohibited from regulating distribution [94.64 (1)(d)] or labeling [94.64 (1)(j)] of fertilizers and prohibited from regulating fertilizer use when in accordance with agronomic directions. Regulation of fertilizer distribution and labeling is a subject of exclusive statewide concern and uniformity.

(b) Local governments are prohibited from requiring that grass clippings, leaves or other organic landscaping wastes be placed in the street or other stormwater drainage system for collection, except in accordance with best management practices to control nutrient run-off from stormwater.

(2) Prohibited Consumer Fertilizer Practices. No person may:

(a) sweep, rake, blow or otherwise place organic landscaping wastes into a street or other stormwater drainage system,

(b) apply any fertilizer to turf when the ground is frozen or over-cast fertilizer on to pavement or impervious surfaces, or,

(c) apply any fertilizer to turf subject to flooding or less than 20 feet from any waters of the state.

(3) Phosphorus Limits for Nonagricultural Use. No person may apply to turf a fertilizer that contains more than 3% phosphorus except:

(a) to establish grass, using seed or sod, or

(b) to supplement soils deficient in phosphorus, as shown by a soil test.

(4) Exclusions from Phosphorus Limits. The 3% phosphorus limit shall not apply to:

(a) any fertilizer marketed for agricultural use or production,

(b) golf courses, plant nurseries, sports field maintenance, home gardens, trees, ornamental plants or turf subject to a nutrient management plan, and,

(c) compost, fertilizer or soil amendments that derive phosphorus nutrients from biosolids or other organic materials.

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(5) Penalty. Any person who violates this section shall first be given a warning regarding proper fertilizer use or yard waste management, and may thereafter be subject to forfeiture under §94.64(12)(a). A person who misapplies fertilizer has a duty to mitigate the adverse effects on the waters of the state as may be practical under the circumstances. The failure to mitigate shall be considered when forfeitures are imposed.

Section 2 . Effective Date. This act takes effect on the first day of the 12th month beginning after publication. Section 3 of this act does not apply to any phosphorus fertilizer in the possession of a consumer if purchased before the effective date.

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Report to the Minnesota State Legislature: Effectiveness of the Minnesota Phosphorus Lawn Fertilizer Law

March 15, 2007

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Executive Summary

First introduced as legislation by the Minnesota Department of Agriculture in 1999, the Minnesota Phosphorus Lawn Fertilizer Law was enacted in 2002 and amended in 2004. The law regulates the use of phosphorus fertilizer on lawns and turf with the intent of reducing unnecessary phosphorus fertilizer use and preventing enrichment of rivers, lakes, and wetlands with the nutrient phosphorus.

The law prohibits use of phosphorus lawn fertilizer unless new turf is being established or a soil or tissue test shows need for phosphorus fertilization. Trained golf course staff and sod farms are exempt from these restrictions. The law also requires fertilizer of any type to be cleaned up immediately if spread or spilled on a paved surface, such as a street or driveway.

The Minnesota Phosphorus Lawn Fertilizer Law is contained in Chapter 18C of the Minnesota State Statutes. As of March of 2007, it is the only state law in the nation regulating the use of phosphorus lawn fertilizer, although several states are currently considering similar legislation or rules.

The Minnesota Department of Agriculture collected and examined information to assess the effectiveness of the law. Their findings are contained in the report titled *Report to the Minnesota Legislature: Effectiveness of the Minnesota Phosphorus Lawn Fertilizer Law*, March 15, 2007. The report can be found at www.mda.state.mn.us/phoslaw.

Findings of the report are:

1. Phosphorus-free lawn fertilizer is widely available in stores statewide.
2. Phosphorus-free lawn fertilizer comprised 82% of lawn fertilizer[1] used in 2006 by weight.
3. Amount of phosphorus applied through lawn fertilizers[1] decreased 48% between 2003 and 2006.
4. The law created a "teachable moment" for extensive yard care and water quality education.
5. In a comparison of similar products in two neighboring states, cost of phosphorus-free lawn fertilizer was the same as products that contain maintenance levels of phosphorus.
6. There have been no reports of the law being enforced by local government.
7. Companies are successfully manufacturing and marketing phosphorus-free lawn fertilizer.
8. Changes in water quality resulting from the law have not been documented at this time.
9. Additional research is needed to quantify benefits of the law for water quality planners and to avoid unintended consequences of phosphorus-free lawn fertilizer use on turfgrass health and water quality.
10. Minnesota is currently the only state regulating phosphorus lawn fertilizer use.

[1] Lawn fertilizer as defined in the report on pages 10 and 11.

Recommendations of the report are:

In three years, the Minnesota Phosphorus Lawn Fertilizer Law has substantially reduced phosphorus lawn fertilizer use and has provided a focus point for extensive water quality education for the general public and professionals. Future opportunities include:

Further research into law's impacts:

Quantify law's impact on water quality: Cities involved in Total Maximum Daily Load (TMDL) water quality planning are asking for quantifiable values for phosphorus runoff reduction that can be assigned to the law and other yard care practices. Those values currently are not available.

Expanding on current turfgrass runoff studies is needed to provide TMDL information to water quality planners. Phosphorus contributions to runoff from soil erosion, grass clippings, animal waste, and tree leaves and seeds need to be evaluated in addition to phosphorus contributions from lawn fertilizer use.

Quantify law's impact on turf management: The premise of the law is that soils already high in phosphorus do not need further phosphorus fertilization. There are soils in the state which are not naturally high in phosphorus and could develop phosphorus deficiencies over time due to phosphorus-free fertilizer use. Lawns deficient in phosphorus can lead to poor turfgrass health, which can result in increased soil erosion and nutrient runoff into surface water.

To avoid unintended consequences of phosphorus-free fertilizer use, an assessment of lawn and turf soil fertility should be conducted to detect early trends in low phosphorus levels. Studies on the nature of turfgrass health decline on phosphorus deficient soils should also be conducted.

Further outreach education:

General public education: Continued public education is needed to reinforce messages and to reach new state residents and individuals caring for a lawn for the first time. Point-of-sale information needs to be provided to fertilizer distributors and retail stores to assist in consumer education.

Education for turfgrass professionals and retail store staff: In addition to applying lawn fertilizer themselves, lawn service providers and retail staff are a major source of consumer information. Better informed professionals will result in a better informed public.

Soil testing education: Outreach education on soil testing methods needs to be provided to homeowners to enable them to detect low phosphorus soil conditions before declines in turfgrass health occur.

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